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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,320	05/05/2005	Franz Hofmann	10808/148	5170

48581 7590 01/05/2007  
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CHICAGO, IL 60610

EXAMINER
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HOANG, HUAN

ART UNIT	PAPER NUMBER
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2827

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/505,320

Applicant(s)

HOFMANN ET AL.

Examiner

Huan Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 082004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's Amendment and Response to the Restriction Requirement filed on 10/10/ 2006 have been carefully considered and the arguments in support of the traversal of the requirement are persuasive. Accordingly, the restriction requirement is withdrawn.

### ***Claim Objections***

2. Claims 1-23 are objected to because of the following informalities:

The word "transistors" in "each selection transistors" (claim 1, line 2 and claim 23, line 2) should be "transistor". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The use of verb "can" (claim 1, line 7, claim 2, line 2, claim 3, line 2, claim 23, line 5 and claim 24, line 9) to indicate possibility or probability renders claims 1-39 indefinite.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 5-12, 14, 18, 24, 25, 28, 30, 34 and 39 are rejected under 35

U.S.C. 102(b) as being anticipated by Gerzberg (US Patent No. 4,590,589 cited by

Applicants).

Gerberg discloses an integrated read-only memory having all the elements and steps as recited in claims 1, 2, 5-12, 14, 18, 24, 25, 28, 30, 34 and 39 as follows:

selections transistors (Fig. 4B) having a drain connection;

an electrode for feeding a voltage or current (L, Fig. 4B and column 3, lines 58-59);

a layer between the drain connections and the electrode (column 9, lines 43-46), the resistance of the layer can be changed (programmable resistor and column 3, lines 59-60);

a source connection per selection transistor;

a bit line that is electrically connected to at least one source connection.

The bit line, word line, row decoder, column decoder are inherent in an array of cells in a memory device.

### ***Allowable Subject Matter***

7. Claim 23 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. Claims 3, 4, 13, 15-17, 19-22, 26-27, 29, 31-33 and 35-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach or suggest the following:

"wherein the resistance of the layer can be switched over between low resistance characteristic." as recited in claim 3.

"a read voltage applied to the layer or a read current fed to the layer within a defined voltage or current range in a read operation of the read-only memory, and a configuration voltage or a configuration current outside the voltage or current range provided for the read operation in a configuration operation of the read only memory." as recited in claims 4 and 23.

"wherein the selection transistors have a vertical construction in the substrate." as recited in claims 13 and 29.

various materials of the layer recited in claims 15-17, 19-22, 31-33 and 35-38.

"wherein the selection transistors are produced in a front end process." as recited in claim 26.

"wherein the layer is deposited in a back end process." as recited in claim 27.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Radjy et al. disclose an apparatus and method for improving the endurance of floating gate devices.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan Hoang whose telephone number is (571) 272-1779. The examiner can normally be reached on Tues-Fri 8:30AM-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Huan Hoang  
Primary Examiner  
Art Unit 2827

HH  
12/24/06